seen that while Schopenhauer's work is grand, even sublime, it is gloomy and discouraging, but Von Hartmann has constructed a work not only beautiful and symmetrical but adapted to the world of to-day and above all encouraging, ennobling and almost Christian. In fact, I can but think it an apt simile to compare these two works of speculative art to two master pieces of ecclesiastical architecture. The one is the ancient cathedral of many years growth, rich in its luxurious variety and pervaded with its perfect harmony of myriad parts, but with all its grandeur gloomy, forbidding, awful. The other is the modern sanctuary, beautiful in its regularity and grand in its simplicity but with these qualities enhanced a thousand-fold by the fact that it is also encouraging, elevating, ennobling.

UPON THE SCIENTIFIC AND ETHICAL FUNCTIONS OF UNIVERSITIES.

Translated from the German of F. W. J. *von* Schelling by ELLA S. MORGAN.

[Second Lecture *Ueber die Methode des Akademischen Studiums.*]

The idea of a university course of study, led us to consider the higher idea of an existing totality of sciences, which we sought to comprehend in its supreme idea, in archetypal knowing; on the other hand, it leads us to the particular conditions under which the sciences are taught and disseminated in our universities.

To the philosopher it might indeed seem more dignified to make an independent sketch of the totality of science, and to prescribe the methods of its first acquisition, without reference to the forms of merely existing arrangements. But I believe that I shall be able to prove in the following lecture that it is just these forms that were necessary in the spirit of the modern world, and will continue to be at least external conditions of the interpenetraiton of the different elements of its civilization, until the turbulent mixture is thereby purified into finer organizations.

The reason why knowing, as a phenomenon, falls into time, is comprehended in the previous lecture. As the unity of the ideal and real, reflected into the finite as a closed totality, as Nature expresses itself in space, the same unity as infinity manifests itself under the universal form of infinite time. But time does not exclude eternity, and science, though in accordance with its phenomena a product of time, is based on a foundation of eternity in the midst of time. The truth is that that which is in itself true and beautiful, is in its nature eternal, and has in the midst of time no relation to time. Science is concerned with time only so far as it utters itself through the individual; knowing, in itself, pertains as little to individuality of time as action in itself. As true action is that which might take place in the name of the whole race, so true knowing is that in which not the individual but reason knows. This independence of time, which belongs to the nature of science, is expressed in the fact that it deals with the Generic, which is itself eternal. Hence it is necessary, as with life and existence, that science pass from individual to individual, from generation to generation. Transmission is the expression of its eternal life. It is not the place to prove, with all the proofs of which this statement is capable, that all the science and art of the present generation of man is a transmitted one. It is inconceivable that man, as he now is, raised himself from instinct to consciousness, from an animal state to a state of reason. There must therefore have been a generation of men preceding the present one, which ancient tradition has perpetuated under the likeness of gods and primitive benefactors of the race. The hypothesis of a primeval race merely explains the traces of a high culture in the early ages of the world, the changed remains of which we find after the first separation of nations—perhaps also explains the recurrence in the traditions of the most ancient peoples, even if we count for nothing the unity of the all-pervading world-spirit: but it gives no explanation of the first beginning, and, like every other empirical theory, only places the explanation further back in time.

However that may be, it is well known that the first mediums of the communication of higher ideas, actions, manners and customs were symbols, as, indeed, the dogmas of the earliest religions were contained in prescriptions for religious ceremonies. The platforms, the laws, the single institutions which were organized

to preserve the preponderance of the divine principle in man, were, in their nature, just so many expressions of speculative ideas. At first the discovery of writing gave to tradition only a greater certainty; the idea of giving, in the spiritual material of speech, an expression of form and art which should have a lasting value, could not arise until later. As even ethics in the flourishing period of humanity did not belong to the individual alone, but was the spirit of the whole, out of which it came and into which it returned, so science lived in the light and air of public life of a universal organization. As in general later times repressed the real and made life more internal, so it was with science. The modern world is in every way a divided world, especially in science, which has its life both in the past and in the present. It is evident, from the character of all science, that modern times had to begin in historical knowing, that it had behind it a ruined world of the grandest phenomena in art and science, with which, separated by an impassable gulf, it was connected only by the external bond of historical tradition, not by the internal bond of continuous organic growth. In the first revival of science, the awakening movement in our part of the world could not be directed quietly and exclusively to its own work, but busied itself with the understanding, admiration, and explanation of the glories of the past. Past knowing became a new object among the original objects of science; hence, since a growing intelligence was necessary to the deep insight into what exists, scholar, artist and philosopher, came to be ideas of equal importance, and the first predicate, *i. e.*, scholar, was conceded also to those who had not enriched the present by a single new thought; and if, as an Egyptian priest said to Solon, the Greeks were eternally young, the modern world was already old and experienced in its youth.

The study of the sciences and arts in their historical development, has become a kind of religion; in their history the philosopher recognizes more plainly the purposes of the world-spirit—the profoundest science, the deepest genius, has devoted itself to this branch of knowledge.

It is one thing to make the past itself an object of scientific investigation; quite another to establish this knowledge in the place of knowing itself. By means of historical knowing, in this sense, the access to the organic powers is closed. Then the question is no longer whether a certain something harmonizes

with the nature of knowing, but whether it agrees with something deduced, some mere imperfect copy of the former. Aristotle, in his writings, questioned Nature itself for the science and history of Nature; in later times this was so completely forgotten, that he himself stood in the way of an insight into the constitution of matter, and his authority was cited against the clear enunciation of natural laws, by Descartes, Kepler and others. In the same way no thought has either importance or reality for the majority of so-called scholars, until it has passed through other brains and become past and historical.

Our universities have been founded more or less in the spirit of this historical knowledge; not so much, perhaps, in the first beginning of the revival of literature, as in later times. Their whole scientific organization could be inferred from this separation of knowing from its prototype by historical learning. At first the great mass to be acquired in order to possess the learning extant, was the reason why knowledge was divided as much as possible into different branches, and the living, organic whole analyzed into its minutest fibres. Since all isolated parts of knowledge, hence all special sciences, as far as the universal spirit has left them, can be only means to the absolute knowing, the necessary consequence of this subdivision was, that in the means and institutions for knowledge, knowing itself is almost lost, and while a busy multitude held the means to be an end in itself, and tried to make it pass current for the end, that which is only one, and absolute in its oneness, withdrew to the higher departments and, even here, gave but few manifestations of untrammeled life.

In regard to this we have first to answer the question, what demands can be made within the accepted limitation, and in the present forms of our universities, in order that a union of the whole may again arise out of this general separation into particulars? I shall not be able to answer this question without at the same time mentioning the necessary demands on those who make a university a permanent institution, namely, the teachers. I shall not hesitate to speak frankly with you of these things. The beginning of university life to the youthful student is, at the same time, the first emancipation from blind faith; here he first acquires and exercises his own judgment. No teacher worthy his vocation, will desire any other respect than that which he can secure on account of his superior intelligence, his scientific cul-

ture, and the zeal with which he seeks to communicate them. Only the ignorant, incapable teacher would wish to found this respect on any other consideration. What determines me still more to speak without reserve in this matter, is the following. It depends partly on the demands which students themselves make on the university and on its teachers, how far they shall be met, and the scientific spirit once awakened among them re-acts favorably, on the whole, because it frightens back the incapable student by the greater demand made on him, and it leads one who is able to satisfy them to avail himself of this activity.

In view of the necessity arising from the very idea of the thing, that the treatment of all sciences shall be in the spirit of the universal and absolute knowing, there can be no objection to asking, where are the teachers who can do this? It is at the universities that they have received their first education; let them but have intellectual freedom, and do not limit them by considerations which have no application in a scientific regard; then the teachers able to meet these demands would educate themselves, and be in a condition to educate others.

It may be asked whether it is proper to make demands on universities in the name of science, when we already know and assume that they are instruments of the State, and must be what the State designed them for. If this intention were that in respect to all science, a certain moderation, caution and limitation to the common and useful should be observed, how could teachers be expected to be progressive and have any desire to cultivate their science according to highest ideas.

It is evident that we must and do presuppose that the State wishes the universities to be real scientific institutions, and that all which we assert in regard to them is valid only on this condition. Undoubtedly the State has the right to suppress the universities, or to transform them into schools of industry, or other schools with similar objects, but it cannot intend the former without, at the same time, desiring the life of thought and the freest scientific agitation, which, if prevented by paltry considerations —chiefly those of protecting the incapable—genius would repulse genius and lame talent.

External completeness by no means insures the true organic life of all the parts of knowing which universities propose to attain, (hence the name university.) For this is the spirit of co-operation which comes from absolute science, of which the special sci-

ences should be the implements, or the objective, real side. I cannot now dwell longer upon this view; meantime, it is evident that it is not a question of the application of philosophy, an attempt which has been made from time to time in nearly every profession, even to the most trivial subjects (trivial in respect to philosophy), so that we have almost tried to make agriculture, obstetrics and the like, philosophical. There can be nothing more foolish than the efforts of lawyers and physicians to give a philosophical appearance to their profession, while they are ignorant of the first principles of philosophy; just as if some one who did not know the first proposition of Euclid should attempt to measure a globe, cylinder, or any other solid.

I speak only of the formlessness of the most objective sciences, in which there is no expression, not even a premonition of art or of the logical laws of thought, and of that kind of stupidity which is unable to rise above the particular, or even to imagine that in sensuous material they are to conceive the super-sensuous, the Universal.

The pure universal is the only source of ideas, and ideas are the life of science. He who knows his particular profession only as a specialty, and is unable to see the universal in it, or to express in it a universal-scientific culture, is unworthy to be a teacher and preserver of science. He may be useful in various ways, as physicist in the erection of lightning rods, as an astronomer in making almanacs, as a physician by the application of electricity, or however he will, but the vocation of teacher demands higher than mechanical talents. Says Lichtenberg, "Marking off the fields of science with pegs may be of the greatest use in the division among the tenants, but the philosopher's reason, looking for unity, warns him at every step to take no notice of the pegs, which are often signs of convenience, and often of narrowness." Undoubtedly it was not the special skill in his profession, but the ability to fill it with ideas of a mind universally cultivated, which made Lichtenberg the most eminent physicist of his time and the best teacher in his profession.

I must here touch upon a notion held by those who are asked to treat their particular profession in the spirit of the whole, namely, that they are expected to consider it merely as a means, on the contrary, each is to pursue his science in the spirit of the whole, in which he considers it as end in itself, as absolute. From the nature of things nothing can be conceived as a member in a true totality, which is active merely as a means in it. Every

state is perfect in that relation in which each single member is at the same time an end in itself and a means to the whole. For the reason that the particular is absolute in itself, it is in the absolute and an integral part of it, and vice versa.

The more a scholar conceives his own circle as an end in itself, even making it, as far as he is concerned, the central point of all knowing which he would wish to extend to an all-embracing totality, the more he strives to express in it universal and absolute ideas. On the contrary, the less he is able to seize it in a universal sense the more will he, consciously or unconsciously, comprehend it as only a means, for that which is not an end to itself must be a means. This would be intolerable to one who respects himself, hence with this narrowness is generally associated the ordinary view, and a want of true interest in science, except as a means to very real, external ends.

I well know that very many, and particularly all those who comprehend science only as a utility, consider universities as mere institutions for the transmission of knowledge, as an association where every one may learn in his youth all that has been accomplished in science up to his time, so that it would necessarily be looked upon as an accident if the teachers, besides communicating existing knowledge, should also enrich science by their own discoveries. But even assumed that no more than this is or ought to be intended by universities, doubtless we still demand that this transmission, shall be intelligently effected, otherwise we do not understand why lectures by living men are at all necessary at universities, the student might be referred to easily intelligible manuals expressly written for him, or to the thick compilations made in every department. But it is undoubtedly a part of intelligent communication of knowledge that one should be able to understand the past and present discoveries of others, rightly, clearly, and in all their relations. Many of them are of a kind whose inner essence can be comprehended only by a kindred genius, by actual re-discovery. Hence one who merely relates what he has himself learned will often and in many sciences give a radically false impression. Where is the historical presentation of the philosophy of ancient times, or of a single philosopher of the ancient or modern world which we can designate with certainty as a successful, true and adequate presentation? But a man who lives in his science as though on the estate of another, who has not personal possession of it, who has not made a safe

and living organ for it, who is not able at any moment to re-construct it for himself, is an unworthy teacher who, in the attempt to even transmit the thoughts of the past or present, historically goes beyond his limits, and undertakes what he cannot do. Undoubtedly it is a part of an intelligent transmission of knowledge that it should be united with good judgment. But if a general and correct understanding of the discoveries of others, is impossible without the capacity for original thought, how much more impossible to critically understand them. It argues nothing that in Germany we have so much of this kind of criticism by those from whom no original thought would escape if they were stood upon their heads. Such judgments as these are in condition to give, are certainly of no service to science.

The necessary consequence of this incapacity to re-construct the totality of science, and re-state it from one's internal vital intuition, is the mere historical discourse; for instance, the well-known introduction to philosophy: "If we direct our attention to ourselves, we become aware of various manifestations of that something which we call the soul. These various activities we refer to different faculties; we call them faculties according to the difference of the manifestation, sensation, understanding, imagination," &c.

Now nothing could be more senseless, more paralyzing, or mind-killing than such a statement. But, more than this, we must remember that the true province of university lectures is to be genetic. This is the real advantage of teaching by living men, that the man does not give mere results, like the writer, but presents—in the higher sciences, at least—the mode of reaching these results; and, in every case, makes the totality of science arise, as it were, before the eyes of the student. How can one who does not himself possess his science as a part of himself, be able to represent it as something to which the student may discover for himself, rather than something given to him for his free acceptance.

As the mere transmission of knowledge, without the self-activity of both teacher and pupil, is insufficient for the teacher to work successfully, it is also very necessary that any one who wishes to teach a science shall have previously mastered it as far as possible. In every art, even the commonest, proofs of completed apprenticeship are demanded before one is allowed to practice the art as a master. Considering the easy attainability

of a professorship in many universities, it would seem as if no vocation were easier than that of a teacher. And as a rule one would be much mistaken in considering an impulse to original production, as a reason for rapidly gaining the position of teacher, for it is exactly the one who is soonest in condition to produce works of his own, who learns with the least sacrifice.

So far we have investigated the universities as to the first object for which they were established. But it is evident that on account of the one-sidedness of the idea in which they were originally founded, they have still much to accomplish. We have so far considered them in conformity with this idea—as institutions erected for the mere sake of knowledge.

Since we do not concede that things are true as long as they are in opposition (for example, knowing as opposed to acting), it is generally necessary that in that relation in which something, having its contrary in some other, approaches its absoluteness, that the opposition in which it is with the other, is also cancelled. According to this it is a mere consequence of the crudeness of the state of knowing, if universities have not yet begun, as nurseries of science, to be at the same time institutions for general culture.

It is here necessary to touch on the constitutions of universities as far as it has an essential influence on their ethical character.

If civil society for the most part shows a decided want of harmony between the idea and the reality, it is because for the time being it has to pursue aims very different from those which arise from the former, and the means have become so disproportionately large that they obscure the end for which they were devised. Universities being but societies for the cultivation of science, need besides what the State does for their material existence voluntarily and for its own advantage, no other contrivances than those which arise from its own idea; wisdom and prudence here agree; it is only necessary to do what the idea of society prescribed for science alone, in order to make the constitution of a university perfect.

Civil society, as long as it is obliged to pursue empirical ends to the detriment of universal ends, can have only an apparent and forced, not a true and internal identity. Universities can have only an absolute object, beyond that they have none.

To accomplish its aims the State must make divisions—not

those arising from the inequalities of rank but the more internal inequalities—by isolating and setting in opposition single talents, the repression of so many individualities and the direction of their powers in so many directions, in order to make them more available instruments for its own purposes.

In a scientific association all the members from the nature of the thing have one object; namely, that no other consideration shall have any weight but science, and no other distinctions permitted except those of talent and culture. Men who are there only to gain notoriety by other means, by extravagance, by wasting their time in frivolous amusement, privileged idlers, in a word, such as are furnished by civil society (and it is generally those who are responsible for the rudeness at universities), should not be tolerated. Whoever cannot prove his diligence and intention to work should be expelled.

If science were paramount, all minds possessed by it, evidently there could be no misdirection of the noble impulses of youth, which are after all chiefly occupied with ideas. If rudeness has prevailed, or ever again prevails, it will be in great part the fault of the teachers or of those who are responsible for the control of the general tone which they give.

If the teachers themselves communicate none but the genuine spirit to those around them, and if no other considerations have weight but science and its advancement, if the exercises of worthless men, scandalizing the vocation of teacher, were not tolerated by the low standard of the general tone itself, those who are capable of distinguishing themselves only by rudeness, would naturally soon vanish from the ranks of students.

The realm of the sciences is no democracy, still less the rule of the mob, but an aristocracy in the best sense of the word. The best shall rule. And the incapables whom nothing but some convenience or other recommends, the mere impertinent praters, who dishonor the scientific guild by petty kinds of industry, should be kept entirely passive. Alone and unaided, no one could escape the contempt which under these circumstances is the consequence of ignorance and intellectual incapacity; and, since these are often associated with ridicule and meanness, they serve as the sport of youth, and thus all too early blunt the natural aversion of inexperienced youth.

Talent needs no protection, if only its opposite is not fostered;

the capacity for ideas creates for itself the highest and most decided efficiency.

This is the only policy necessary in order to make all scientific institutions flourish, and to give all possible dignity from within and respect from without. In order to make universities specially models of constitution, nothing is necessary beyond what one must desire in any case without committing an inconsistency, and as I do not concede that there is any gulf between knowing and acting, I cannot allow it in reference to universities.

The cultivation of rational thinking, by which I understand no superficial habit, but a culture which goes into the very essence of man, the only real scientific culture, is also the only cultivation for rational acting. Ends lying beyond this absolute sphere of scientific culture are excluded from the nature of the first intention of universities.

He who from the standpoint of his special science has received a complete cultivation up to absolute knowing, is already lifted up into the realms of clearness and rationality. The most dangerous thing for man is to be under the dominion of obscure ideas; it is a great gain when this dominion is limited, and all is gained when he has pressed through to absolute consciousness, and walks wholly in the light.

Science directs the mind immediately to that intuition, which, a lasting self-determination, leads immediately to identity with itself and thence to a truly blessed life. Experience and life educate slowly, not without much loss of time and strength. To him who dedicates himself to science it is granted to anticipate this experience, and to recognize immediately and in himself that which after all is the only result of the most cultured and richly experienced life.

THIRD LECTURE—THE FIRST PRESUPPOSITIONS OF A UNIVERSITY COURSE OF STUDY.

In the preceding lecture I have sufficiently shown the high aim of one who devotes himself exclusively to science, as indicated by the nature of science itself, therefore I shall be able to compress into few words what I have to say of the general claims which must be made on one who chooses this vocation.

The idea of study is naturally and especially from the conditions of modern culture, two-sided. First the historic, in respect to which mere learning is sufficient. As a result of what we have already demonstrated, we have the unavoidable necessity of the surrender, the resignation of the will in obedience to the thing to be learned in all sciences. A very common illusion often misleads the better class of minds in their fulfillment of this condition.

In learning they are conscious of making an effort which is not really activity, and as activity is the more natural condition, they consider every kind of activity a higher expression of their original capacity, even although the ease with which they think and compose should arise more from their ignorance of the true objects and real problems of scientific knowing, than from a real fertility of the productive faculty. In learning, even when directed by the living lecturer, there is no possibility of choosing; one must take every step, the difficult as well as the easy, the attractive and the less attractive. The tasks in learning are not taken up arbitrarily, according to the association of ideas or according to inclination, but they have a logical necessity. In intellectual amusement, which combines moderately active imagination with very little knowledge of the claims of science, one may select what pleases, neglect what does not please, or whatever requires effort either in discovery or original thought.

Even one who is by nature fitted to take for his task subjects not previously treated and in new departments, must still have trained his mind in this way (*i. e.*, in learning), in order to succeed. Without this training there will always remain a desultory method and fragmentary way of thinking, even in original endeavors. Only he is able to succeed in science who can shape it to its totality and develop it to a certainty in itself, who omits no essential link in order to exhaust every necessary element.

A certain popular tone in the higher sciences by virtue of which they become everybody's interest and suited to everybody's comprehension, has so spread abroad the disinclination to effort, that the indolence which is not too particular about ideas, agreeable superficiality and pleasant shallowness even became a part of a fine education; and it has finally limited the object of university culture to sipping only so much of the wine of the higher sciences as might be respectfully offered to a lady.

We must give to the universities in part the honor of being the

chief opposers of the threatening stream of superficiality which modern pedagogics has still more increased: although on the other hand it was disgust at their tedious thoroughness, unenlivened by any spiritual life, which created the first opening.

Every science has besides its own peculiar side, another which it has in common with art. It is the side of form, which in some of them is even quite inseparable from the matter. All excellence in art, all shaping of a noble material in an adequate form proceeds from that limitation which the mind prescribes for itself. The form is attained only by practice, and all true instruction should aim more at form than at matter.

There are transient and perishable forms, particularly all those in which the spirit of science manifests itself,—different modes of manifestation of regenerative genius renewing its youth in new forms. But in the particular forms there is a universal and absolute form of which they again are but the symbols, and their art ascends in the degree to which they succeed in revealing this one form. But all art has a side which is to be acquired by learning. The dislike to forms and their given limits is the dislike to art in science.

Acquisition is not complete in the given and special form which can only be learned, but in a form peculiar, self-made, and capable of reproducing the matter (of which it is the manifestation). Learning is only a negative condition, true "intus-susception" is impossible without an inward assimilation into itself. All rules for study are comprehended in one: learn only that you may act. Only by this divine capacity for production is man truly man, without it only a tolerably well-arranged machine. He who has not, with the same high impulse as the artist who calls forth out of the raw material the image of his soul, his own discovery, he who has not worked out the image of his science in all its members and features into perfect harmony with the original image, has not possessed it.

All producing is the result of a meeting or inter-penetration of the universal and the particular. The secret of creation is to seize sharply the contrast of some particular with the absolute, and at the same time in the same indivisible act to comprehend the one in the other. In this way are formed those higher points of unity, by which that which is separated (and partial) tends toward the Idea,—those higher formulas in which the concrete resolves itself, "the laws born of the heavenly ether, not generated by man's mortal nature."

The ordinary division of knowledge into rational and historic is so designed that the power includes a knowledge of principles, the latter becomes a mere science of facts. It might be replied that principles may also be merely learned historically, but in that case they are not apprehended as principles. The nickname of bread-and-butter sciences is given to those sciences which more immediately than others serve for the uses of life. But no science in itself deserves such a name. To him who uses philosophy or mathematics as means, to him they are as much bread-and-butter sciences as law or medicine to him who has no higher interest in them than their usefulness to himself. The end of all such study (Brodstudium) is that one learns the mere results, either with entire neglect of principles, or if these are learned historically it is only for the sake of some secondary object, for instance, in order to be able to give a necessary account of them at the regular examinations.

Such a manner of study is only possible if one has made up his mind to acquire a science for some mere empirical use, that is considers himself as a means. No one with a spark of self-respect could be so base in the presence of science as to value it only as a device for empirical ends and aims. The necessary results of such a way of studying are the following:

First it is impossible even to properly appreciate that which is so received, consequently it is unavoidably false in the application, since the possession of it is not dependent upon a living organ of perception, but is a mere matter of memory. How often do universities send out such utilitarian scholars, who have learned excellently well everything which was to be learned in their profession, but are completely wanting in judgment, in the sub-sumption of the particular in the general. Living, scientific zeal, educates up to intuition, but in intuition the general and the particular are always one. The utilitarian scholar (brodgelehrte) on the contrary has no intuition, he can construe nothing in an unforeseen emergency, cannot combine by his own activity, and as in learning it is impossible to be prepared for all possible emergencies, he is deserted by his knowledge when it is most needed.

Another necessary consequence is that such an one is quite incapable of progressing, and thus lacks the chief characteristic of man, and especially the man of science. He cannot progress; for true progress is not to be estimated according to the measure

of early instruction, but is to be judged from itself and from absolute principles. At the best he but understands—what has no spiritual life itself—newly recommended means, this or that dull theory which has just arisen and excites the curiosity, or some new formulas, learned novelties, &c., &c. Everything must appear to him as a particular somewhat in order to be apprehended. For only the particular can be learned, and in the quality of being learnable everything becomes a particular. Hence he is the sworn enemy of every real discovery which is made in the realm of the universe—of every idea, because he does not comprehend it, of every real truth which disturbs him in his repose. If he so far forgets himself as to rise in opposition, either he behaves in the well-known awkward way, estimates the new according to principles and theories which are just what it claims to supersede, he quarrels with principles and authorities which might have had weight in the preceeding state of science, or else, conscious of his own emptiness, he has no other resource but abuse, and uses the weapons of slander, in which he feels himself really justified, because every new discovery is really a personal attack upon himself.

For all students the result, or at least the first tendency depends more or less on the kind and degree of culture and knowledge which they bring with them to the university. Of the first external and moral culture which is necessary to this stage of education I will say nothing, as everything which could be said is self-evident.

As regards the so-called preparatory knowledge, the kind of knowing which is gained previous to the university cannot well be described otherwise than as a practical familiarity with the elements. For the extension of this knowledge there is doubtless a point on either side beyond which one must not pass.

The higher sciences cannot be possessed or attained in the form of technical knowledge. It would not be advisable at a time when the absolute cannot be truly reached in any direction, to anticipate that species of knowing which in its nature depends upon the absoluteness and at the same time communicates this characteristic to all other knowing. Even sciences whose material consists in part of technical knowledge, which can attain their true value only in the connection of the whole—the communication of these technical details before the spirit is consecrated in them through the higher sciences, would be followed by

future neglect, but have no advantage. The educational zeal of the time just passed, tried to turn the lower schools into something little short of universities, but has only given a new impulse to half-wayness in science.

It is necessary to linger at every stage until we are sure of a firm footing. It seems granted to but few to skip over any stage, in reality it is never the case. At an early age Newton read the elements of Euclid as if it were his own work, or as others read entertaining books. Consequently he was able to pass from elementary geometry to higher investigations.

As a rule the other extreme is the case, namely, the most profound neglect of the preparatory schools. That which should have been acquired before entering on a university course comprises all that which belongs to the mechanics of science. In part every science has its own mechanical stage, and in part the universal constitution of the science makes mechanical expedients indispensable to their attainment. An example of the former is the first and most general operations of the analysis of the finite; the professor can indeed develop their scientific principles, but not teach the actual calculations. An example of the latter is a practical acquaintance with languages, ancient and modern, since they alone open the doors to the highest sources of culture and science. Among the preparatory studies belong almost everything which can be apprehended by the memory, partly because it is strongest in youth and then most eager for exercise.

I shall here speak chiefly of the early study of languages which is not only indispensable as a necessary step to all others in scientific education, but has an independent value in itself.

It is not necessary to confute the miserable arguments of the modern idea of education against the learning of languages. These arguments are valuable only as so many particular proofs of the commonplace nature of the ideas which lie at the bottom of them, and are prompted by a mistaken zeal against the excessive cultivation of the memory according to the ideas of an empirical psychology. The example from experience was taken from certain scholars famous for wonderful memory who were, indeed, rich in information of all kinds, but who could not, by that means, gain what nature had denied them. For the rest, the fact that neither a great general, mathematician, philosopher, nor poet, was ever found without great capacity and energy

of the memory, was a matter of no moment to them, because they had no intention of making great generals, mathematicians, poets or philosophers, but rather useful citizens, industrious men.

I know of no kind of occupation better calculated to exercise at an early age the dawning wit, ingenuity and invention, than the study of the ancient languages. I do not speak of the science of language in the abstract sense, in so far as it is an immediate copy of the inner type of reason and the object for scientific instruction. Neither do I refer to philology, in relation to which the knowledge of languages is but a means to a much higher end. To call the mere linguist a philologist is a misnomer; the latter stands with the artist and philosopher on the highest summit, or rather artist and philosopher unite in him. His work is the historical construction of works of art and science, whose history he must comprehend and represent as a living intuition. At the university, philology in this sense only should be taught, the university professor should not be a mere linguist. To return to my first statement.

Language in itself, grammatically considered, is a continuous, applied logic. All scientific education consists in the readiness to recognize possibilities, while on the contrary, the ordinary knowing comprehends only realities. When a physicist has recognized that under certain conditions a phenomenon is actually possible, he has also recognized that it is real. The study of language as an analytical study, but particularly as a progress in the art of reading by which exercise ingenuity cultivates this recognition of possibilities in a way suitable to the boy's age and can in after years still give a pleasant occupation to the boyish sense which he retains.

It is an immediate culture of the inner perception to recognize living intelligence in a language dead to us, and the relation is but that of the natural philosopher to nature. Nature is to us a primeval author who has written in hieroglyphics, whose leaves are colossal, as the artist says in Goethe. Even one who wishes to investigate nature only empirically most needs an acquaintance of her speech in order to understand her forgotten tongue. The same is true in the higher sense of philosophy. The earth is a book, compiled from fragments and rhapsodies of different ages. Every mineral is a real philological problem. In geology we still await a Wolf who is to analyze the earth as Homer has been analyzed, and show its composition.

It is not possible to go into particular departments of the university course of study and erect as it were the whole edifice from the foundation stone, without at the same time following the branches of science itself and constructing from them the organic whole.

I shall accordingly be obliged next to present the inter-connection of all sciences among themselves and the objectivity which this internal organic unity has received from the external organization of universities.

In a measure this outline might take the place of a general encyclopædia of science, but as I never consider these purely in themselves, but always in special relation to my lecture, a system of knowledge derived in the strictest manner from the highest principles cannot be expected. In these lectures I cannot exhaust my subject. This can be done only in actual construction and demonstration. I shall leave unsaid much which perhaps deserves to be said, but on the other hand I shall avoid saying anything which were better unsaid, either on its own account or because of the time and the present condition of science.

DOGMATIC PROOFS OF THE IMMORTALITY OF THE HUMAN SOUL.

Translated from the German of Karl Friedrich Goeschel, by T R. VICKROY.

It may be presumed as known that the three intellectual proofs for the existence of God, with which philosophy has so long busied itself, have but recently been proved in their necessary unfoldings and scientific statement. Better known is the relation between *being* and *thought*, from which these proofs are unfolded, or from whose unfoldings they proceed, since, in the first place, out of this outer, objective, substantial existence of the world, a deduction is made of the creative thoughts as a ground underlying this existence, which creative thought shows itself as the power and wisdom manifest in being, and hence as the absolute